SUMMIT
GEOENGINEERING SERVICES
434 Cony Road
Augusta, Maine 04330

SOIL BORING LOG

Project: Little Falls Mill Renovation
Depot Street
South Windham, Maine

Boring #: **B-5**
Project #: 17417
Sheet: 1 of 2
Prep by: CWC

Drilling Co: Nothern Test Boring
Foreman: Mike Nadeau
Summit: Craig Coolidge, P.E.

Ground Elevation: Approximately 100 ft +/-
Reference: Site Plan Topography by Oak Engineers, LLC
Date started: 10/1/2008 Date Comp: 10/1/2008

DRILLING METHOD
Vehicle: ATV
Model: Diedrich D-50
Method: 4" Casing/RW

SAMPLER
Type: 24" SS
Hammer: 140 LB
Fall: 30"

GROUND WATER DEPTH

Date	Depth	Elevation	Comments
10/1/2008	8 ft	92 ft +/-	Observed moisture change

Depth (ft.)	SAMPLE DATA No.	Pen/Rec (in.)	Depth (ft)	Blows	ENGINEERING DESCRIPTION	GEOLOGIC DESCRIPTION
	S-1	24/17	0 - 2	1	Dark brown SILT, rootlets, moist, ML	TOPSOIL
1				2	Dark brown SAND, little to trace Gravel	5"
				2	Silt, and Organics, loose, damp, SM-SP	FILL
2				3	Frequent brick, ash, and/or coal debris	
3						
4						
5						
	S-2	24/8	5 - 7	1	Same as above, mixed with brick debris	
6				1	very loose, moist, SM-SP	
				1		
7				WOH		
	S-3	24/5	7 - 9	1	Predominately brick debris with some to	
8				1	little soil (same as above), loose, wet	
				1		
9				WOH		
10						
	S-4	24/10	10 - 12	1	Same as above, very loose, wet, SP-SM	
11				1		
				1		
12				2	Thin organic Silt layer at 11.5'	11.5'
	S-5	24/7	12 - 14	3	Dark brown SAND, little Gravel, trace	GLACIAL ALLUVIUM
13				4	Silt, wet, SW	
				5		
14						
15						14.5'
	S-6	24/24	15 - 17	2	Gray Silty CLAY, trace fine Sand	GLACIAL MARINE
16				1	soft, wet, CL	PP = 500 psf
				1		wc = 45.3%
17				1		
	UT-2	24/18	15 - 17	Hyd	Same as above, soft, wet, CL	wc = 37.9%
18				Push		P'c = 4.9 ksf
				↓		Cc = 0.41, Cr = 0.03
19				↓		Torvane = 575
						LL = 38, PI = 16
20						Sand = 5.8%
						Silt = 55.6%
21					Sv = 860 psf, 120 psf remold	Clay = 38.6%
22					Sv = 870 psf, 110 psf remold	

VIL_RESP02188

SUMMIT GEOENGINEERING SERVICES 434 Cony Road Augusta, Maine 04330	SOIL BORING LOG	Boring #: B-5
	Project: Little Falls Mill Renovation Depot Street South Windham, Maine	Project #: 17417 Sheet: 2 of 2 Prep by: CWC
Drilling Co: Nothern Test Boring	Ground Elevation: Approximately 100 ft +/-	
Foreman: Mike Nadeau	Reference: Siteplan Topography by Sheridan Corporation	
Summit: Craig Coolidge, P.E.	Date started: 10/1/2008 Date Comp: 10/1/2008	

DRILLING METHOD	SAMPLER
Vehicle: ATV	Type: 24" SS
Model: Diedrich D-50	Hammer: 140 LB
Method: 4" Casing/RW	Fall: 30"

GROUND WATER DEPTH			
Date	Depth	Elevation	Comments
10/1/2008	8 ft	92 ft +/-	Observed moisture change

Depth (ft.)	SAMPLE DATA No.	Pen/Rec (in.)	Depth (ft)	Blows	ENGINEERING DESCRIPTION	GEOLOGIC DESCRIPTION
21					Gray Silty CLAY, trace fine Sand, soft, wet, CL	GLACIAL MARINE
22						
23						
24						
25						
26					Sv = 760 psf, 65 psf remold	
27					Sv = 825 psf, 100 psf remold	
28	S-7	24/24	27 - 29	WOH 1	Gray Silty CLAY, trace fine Sand, soft, wet, CL	PP < 500 psf wc = 37.6%
29				WOH 1		
30						
31					Sv = 870 psf, 10 psf remold	
32					Unable to advance vane, sand layer	31'
33					Rotary wash advance, sandy soil to 34.7'	
34						
35					End of exploration at 35.3', rotary wash into bedrock from 34.7' to 35.3'	34.7' BEDROCK
36						
37						
38						
39						
40						
41						
42						
55						

VIL_RESP02189

SUMMIT GEOENGINEERING SERVICES 434 Cony Road Augusta, Maine 04330	SOIL BORING LOG Project: Little Falls Mill Renovation Depot Street South Windham, Maine	Boring #: P-1 Project #: 17417 Sheet: 1 of 1 Prep by: CWC

Drilling Co:	Nothern Test Boring	Ground Elevation:	Approximately 98 ft +/-
Foreman:	Mike Nadeau	Reference:	Site Plan Topography by Oak Engineers, LLC
Summit:	Craig Coolidge, P.E.	Date started: 10/1/2008	Date Comp: 10/1/2008

DRILLING METHOD	SAMPLER
Vehicle: ATV	Type: 24" SS
Model: Diedrich D-50	Hammer: 140 LB
Method: 2-1/4" SSA	Fall: 30"

GROUND WATER DEPTH

Date	Depth	Elevation	Comments
10/1/2008	N/E	N/E	None Encountered

Depth (ft.)	SAMPLE DATA No.	Pen/Rec (in.)	Depth (ft)	Blows	ENGINEERING DESCRIPTION	GEOLOGIC DESCRIPTION
					Dark brown SILT, rootlets, moist, ML	TOPSOIL
1					Olive brown and mottled Silty CLAY	5"
					trace fine Sand, firm, moist, CL	GLACIAL MARINE
2						
3						
4						
					End of exploration at 4.2', refusal	4.2'
5						BEDROCK
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

VIL_RESP02190

SUMMIT
GEOENGINEERING SERVICES
434 Cony Road
Augusta, Maine 04330

SOIL BORING LOG

Project: Little Falls Mill Renovation
Depot Street
South Windham, Maine

Boring #: P-2
Project #: 17417
Sheet: 1 of 1
Prep by: CWC

Drilling Co:	Nothern Test Boring
Foreman:	Mike Nadeau
Summit:	Craig Coolidge, P.E.
Ground Elevation:	Approximately 110 ft +/-
Reference:	Site Plan Topography by Oak Engineers, LLC
Date started:	10/1/2008 Date Comp: 10/1/2008

DRILLING METHOD	SAMPLER
Vehicle: ATV	Type: 24" SS
Model: Diedrich D-50	Hammer: 140 LB
Method: 2-1/4" SSA	Fall: 30"

GROUND WATER DEPTH

Date	Depth	Elevation	Comments
10/1/2008	N/E	N/E	None Encountered

Depth (ft.)	SAMPLE DATA No.	Pen/Rec (in.)	Depth (ft)	Blows	ENGINEERING DESCRIPTION	GEOLOGIC DESCRIPTION
					Dark brown SILT, rootlets, moist, ML	TOPSOIL
1					Dark brown SAND, little to trace Gravel	4"
					Silt, and Organics, loose, damp, SM-SP	FILL
2					Occasional brick, ash, and/or coal debris	
3					Occasional cobbles and debris	
4						
5						
6						
7						
					Denser drilling at 7'	
8						
9					End of exploration at 4.2', refusal	8.5'
						BEDROCK
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

VIL_RESP02191

APPENDIX C
LABORATORY RESULTS

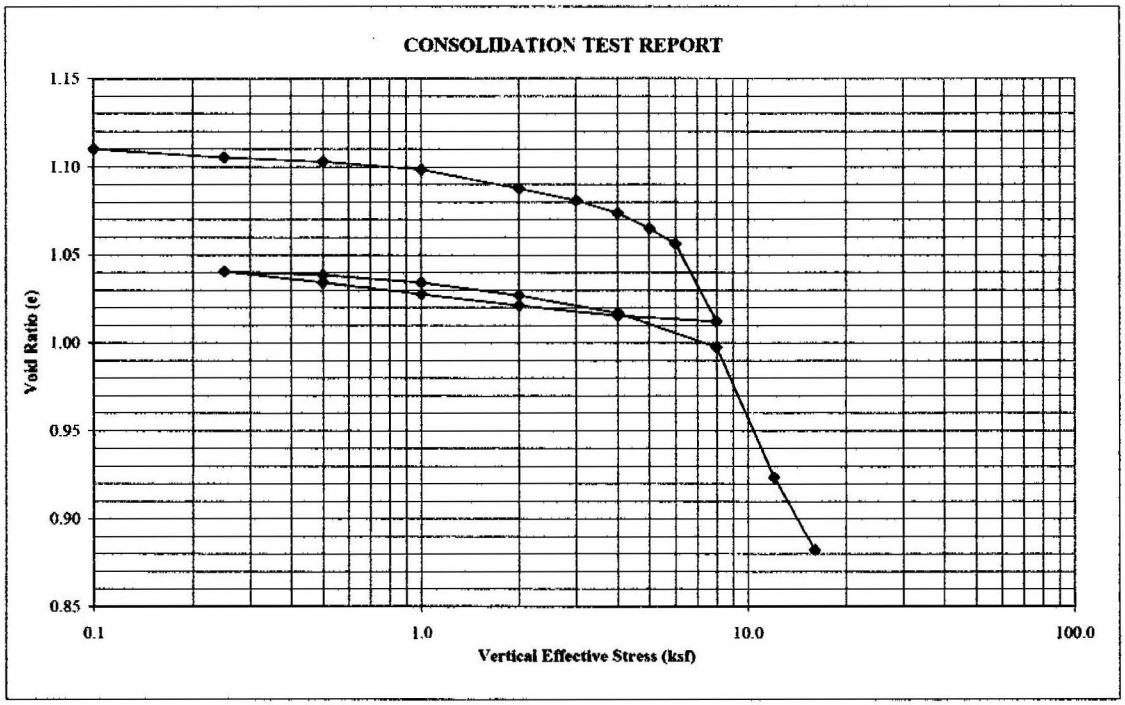
SUMMIT GEOENGINEERING SERVICES
434 Cony Road Augusta, Maine 04330
Phone: (207) 621-8334 Fax: (207) 626-9094

ONE DIMENSIONAL CONSOLIDATION - ASTM D2435

PROJECT NAME: Little Falls Mill Renovation
CLIENT: Resurgence Engineering
SOIL DESCRIPTION: Silty Clay
INTENDED USE: Soil Investigation

PROJECT # 17417
SAMPLE #: UT-2
DATE: 10/16/2008
SOURCE: Boring B-5, UT-2, 17' to 19'
TECH: Craig Coolidge, P.E.

CONSOLIDATION TEST RESULTS



Load (ksf)	Void Ratio (e)	Cv (ft^2/day)
0.25	1.105	3.50
0.50	1.103	2.81
1.00	1.099	2.22
2.00	1.088	1.65
3.00	1.081	1.51
4.00	1.074	1.30
5.00	1.065	0.85
6.00	1.056	0.64
8.00	1.012	0.36
4.00	1.015	2.36
2.00	1.021	1.56
1.00	1.028	1.13
0.50	1.034	0.79
0.25	1.041	0.61
0.50	1.039	1.12
1.00	1.034	1.31
2.00	1.027	1.20
4.00	1.017	1.37
8.00	0.997	1.06
12.00	0.924	0.40
16.00	0.882	0.40

Preconsolidation Pressure (P'c):	4.9	ksf
Compression Index (Cc):	0.41	
Recompression Index (Cr):	0.03	
Initial Void Ratio:	1.110	
Specific Gravity:	2.76	
Natural Moisture Content:	37.9	%
Natural Degree of Saturation:	86.4	%
Dry Unit Weight:	81.6	pcf
Torvane Shear Strength:	575	psf
Liquid Limit (LL):	38	
Plastic Index (PI):	16	

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SUMMIT GEOENGINEERING SERVICES
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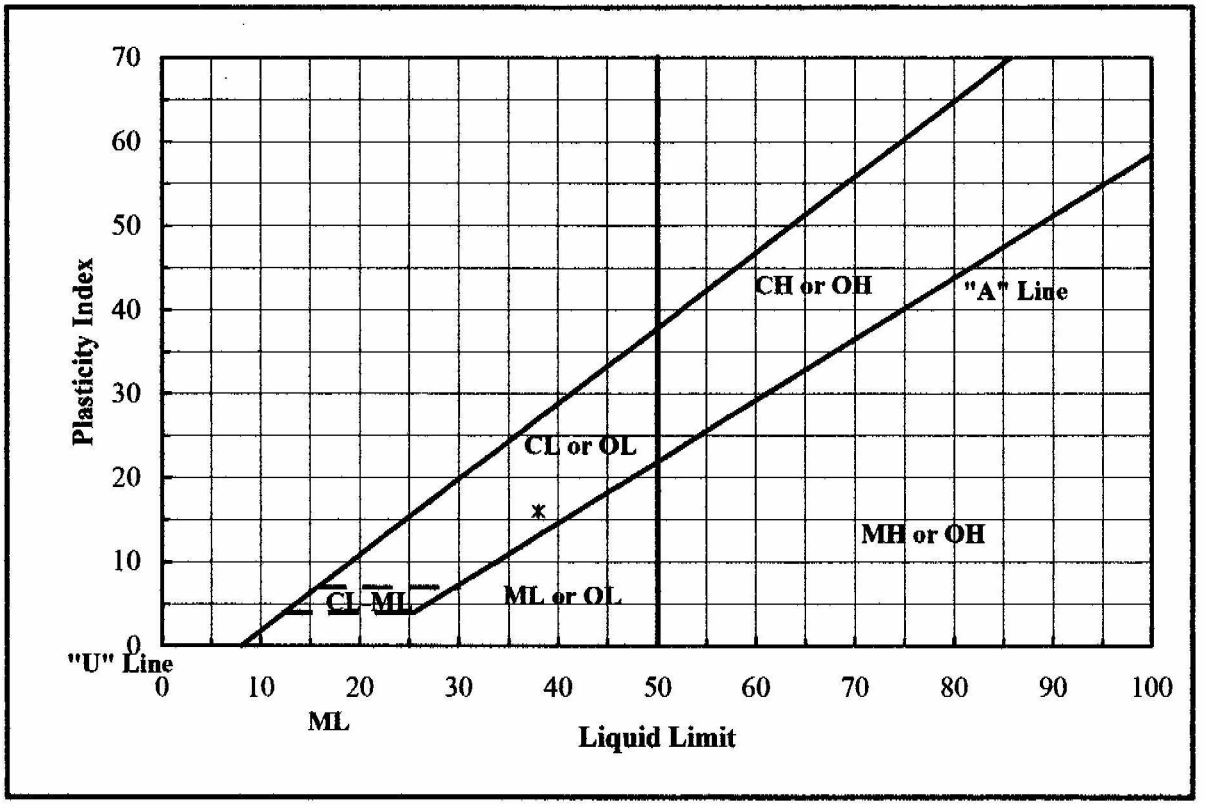
Phone: (207) 621-8334 Fax: (207) 626-9094

ATTERBERG LIMIT TEST - ASTM D4318

PROJECT NAME:	Little Falls Mill	PROJECT #:	17417
CLIENT:	Resurgence Engineering	SAMPLE #:	UT-2
SOIL DESCRIPTION:	Lean Clay, CL	DATE:	39742
INTENDED USE:	Investigation	SOURCE:	B-5
		TECHNICIAN:	M. Sullivan

DATA

Source	Depth	LL	PL	PI	Classification
B-5	17' to 19'	38	22	16	Lean Clay, CL



Notes:

Reviewed: Darrell A. Gilman, CMT Manager
Sent: 10/23/2008

VIL_RESP02194

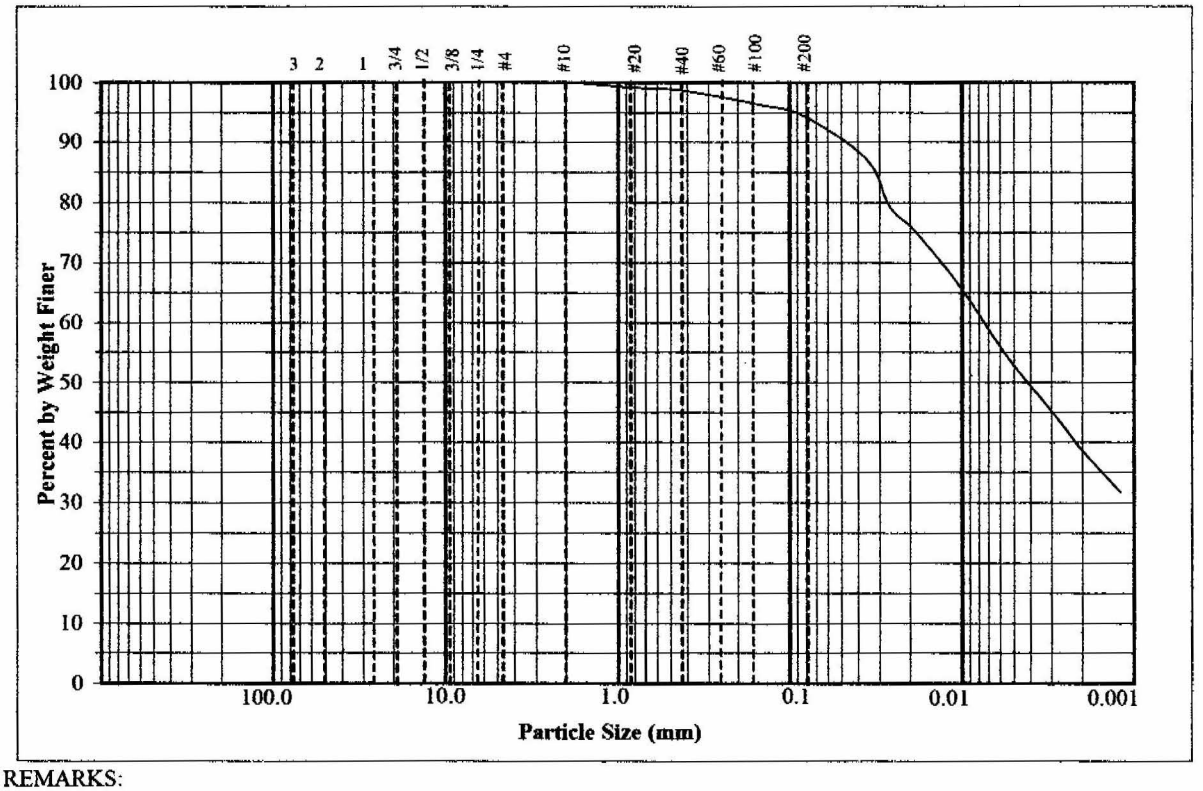
SUMMIT GEOENGINEERING SERVICES
434 Cony Road, Augusta, Maine 04330
Phone: (207) 621-8334 Fax: (207) 626-9094

GRAIN SIZE ANALYSIS - ASTM D422

PROJECT NAME:	Little Falls Mill	PROJECT #:	17417
CLIENT:	Resurgence Engineering	SAMPLE #:	UT-2
SOIL DESCRIP:	M. Sullivan	DATE:	27-Oct
INTENDED USE:	Investigation	SOURCE:	B-5, 17' - 19'

DATA

PARTICLE SIZE mm		% BY WT FINER
38.10	(1-1/2 in)	100.0
25.40	(1 in)	100.0
19.05	(3/4 in)	100.0
12.70	(1/2 in)	100.0
9.53	(3/8 in)	100.0
6.35	(1/4 in)	100.0
4.75	(No. 4)	100.0
2.00	(No. 10)	100.0
0.85	(No. 20)	99.2
0.43	(No. 40)	98.7
0.15	(No. 100)	96.3
0.08	(No. 200)	94.2
0.035		86.9
0.026		79.2
0.019		75.4
0.010		66.2
0.006		54.4
0.003		44.7
0.002		38.6
0.001		31.7



REMARKS:

Reviewed: Darrell Gilman, CMT Manager
Sent: 10/28/08

VIL_RESP02195

SUMMIT GEOENGINEERING SERVICES
434 Cony Road Augusta, Maine
Phone: (207) 621-8334 Fax: (207) 626-9094

Laboratory Determination of Water (Moisture) Content of Soil ASTM D2216

PROJECT NAME:	Little Falls Mill Renovation	PROJECT #:	17417
CLIENT:	Resurgence Engineering	SAMPLE #:	Various
SOIL DESCRIP:	Silty Clay	DATE:	10/6/08
INTENDED USE:	Soil Investigation	SOURCE:	Test Borings
		TECH:	Craig Coolidge, P.E.

Sample Number	Sample Source	Percent Moisture
B-3, S-5	B-3, 10' - 12'	41.9
B-3, S-6	B-3, 14' - 16'	34.6
B-3, UT-1	B-3, 16' - 18'	28.0
B-4, S-2	B-4, 5' - 7'	23.2
B-4, S-3	B-4, 10' - 12'	56.1
B-5, S-6	B-5, 15' - 17'	45.3
B-5, S-7	B-5, 27' - 29'	37.6

REMARKS:

VIL_RESP02197

SUMMIT GEOENGINEERING SERVICES
434 Cony Road, Augusta, Maine 04330
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TABLE OF CONTENTS

PROJECT NO: 14134
PROJECT NAME: Little Falls Mill Concrete Evaluation
CLIENT: Resurgence Engineering & Preservation

Summit Geoengineering Services
434 Cony Road, Augusta, Maine 04330
Phone:(207) 621-8334 Fax: (207) 626-9094

Obtaining & Testing Drilled Cores & Sawed Beams of Concrete ASTM C42

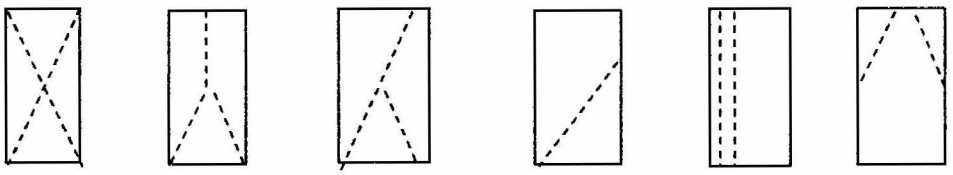
Project:	Little Falls Landing	**Project Number:**	14134
Client:	Resurgence Engineering	**Sample Number:**	C1
Source:	Basement, East Wall at 5.5	**Date:**	September 16, 2008
		Technician:	M. Sullivan

Test Data

Core Number:	C1
Source:	Basement, East Wall at 5.5
Sample Depth:	Face of Wall to 5.4"
Description:	Basement, East Wall at 5.5
Area, in^2:	5.726
Volume, ft^3	0.01734
Density. $lbs./ft^3$	148.8
Sample Condition:	WET
Temperature at Loading, ^0F:	70
Rate of Loading, psi/sec.	50

Laboratory Test Results

Core Number	Test Date	Unit Weight ($Lbs./ft^3$)	Load (Kips)	Uncorr. Strength (Psi)	Correction Factor	Break Type	Corrected Strength (Psi)
C1	09/16/08	148.8	21.7	3788	1.00	5	3788



1 Cone; 2 Cone and Split; 3 Cone and Shear; 4 Shear; 5 Columnar; 6 Other

Remarks: 3" core samples were used due to spacing of the concrete reinforcement and concrete thickness of test locations.

Reviewed: Darrell A. Gilman, CMT Manager
Sent: 9/16/2008

VIL_RESP02199

Summit Geoengineering Services
434 Cony Road, Augusta, Maine 04330
Phone:(207) 621-8334 Fax: (207) 626-9094

Obtaining & Testing Drilled Cores & Sawed Beams of Concrete ASTM C42

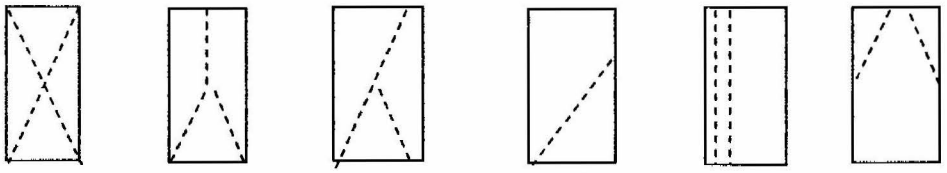
Project:	Little Falls Landing	**Project Number:**	14134
Client:	Resurgence Engineering	**Sample Number:**	C2
Source:	Basement Floor at Line 16	**Date:**	September 16, 2008
		Technician:	M. Sullivan

Test Data

Core Number:	C2
Source:	Basement Floor at Line 16
Sample Depth:	1.36" in From Face to 5.35"
Description:	Basement Floor at Line 16
Area, in^2:	5.726
Volume, ft^3	0.01312
Density. lbs./ft^3	152.4
Sample Condition:	WET
Temperature at Loading, ^0F:	70
Rate of Loading, psi/sec.	40 to 50

Laboratory Test Results

Core Number	Test Date	Unit Weight (Lbs./ft^3)	Load (Kips)	Uncorr. Strength (Psi)	Correction Factor	Break Type	Corrected Strength (Psi)
C2	09/16/08	152.4	24.1	4202	0.96	3	4043



1 Cone; 2 Cone and Split; 3 Cone and Shear; 4 Shear; 5 Columnar; 6 Other

Remarks: 3" core samples were used due to spacing of the concrete reinforcement and concrete thickness of test locations.

Reviewed: Darrell A. Gilman, CMT Manager
Sent: 9/16/2008

VIL_RESP02200

Summit Geoengineering Services
434 Cony Road, Augusta, Maine 04330
Phone:(207) 621-8334 Fax: (207) 626-9094

Obtaining & Testing Drilled Cores & Sawed Beams of Concrete ASTM C42

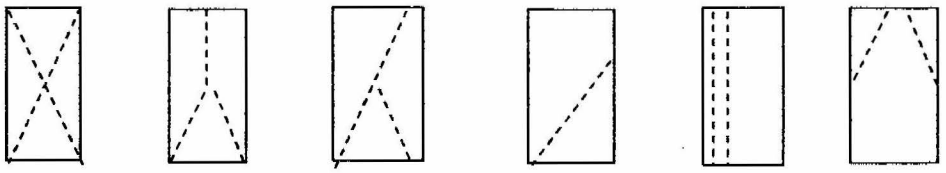
Project:	Little Falls Landing	**Project Number:**	14134
Client:	Resurgence Engineering	**Sample Number:**	C3
Source:	Basement, North Wall at Line 21.	**Date:**	September 16, 2008
		Technician:	M. Sullivan

Test Data

Core Number:	C3
Source:	Basement, North Wall at Line 21.5
Sample Depth:	From Face to 5.4"
Description:	Basement, North Wall at Line 21.5
Area, in^2:	5.726
Volume, ft^3	0.01705
Density. lbs./ft^3	150.1
Sample Condition:	WET
Temperature at Loading, ^0F:	70
Rate of Loading, psi/sec.	45 to 50

Laboratory Test Results

Core Number	Test Date	Unit Weight (Lbs./ft^3)	Load (Kips)	Uncorr. Strength (Psi)	Correction Factor	Break Type	Corrected Strength (Psi)
C3	09/16/08	150.1	29.4	5138	1.00	6	5138



1 Cone | 2 Cone and Split | 3 Cone and Shear | 4 Shear | 5 Columnar | 6 Other

Remarks: 3" core samples were used due to spacing of the concrete reinforcement and concrete thickness of test locations.

Reviewed: Darrell A. Gilman, CMT Manager
Sent: 9/16/2008

VIL_RESP02201

Summit Geoengineering Services
434 Cony Road, Augusta, Maine 04330
Phone:(207) 621-8334 Fax: (207) 626-9094

Obtaining & Testing Drilled Cores & Sawed Beams of Concrete ASTM C42

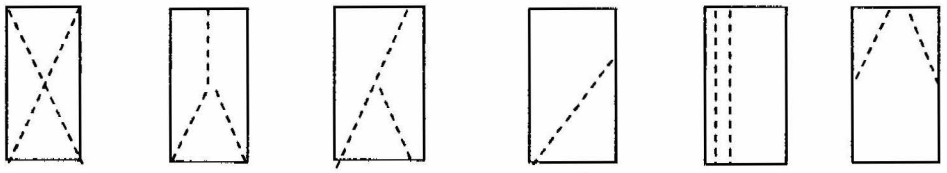
Project:	Little Falls Landing	**Project Number:**	14134
Client:	Resurgence Engineering	**Sample Number:**	C5
Source:	Basement, Center Column at 30	**Date:**	September 16, 2008
		Technician:	M. Sullivan

Test Data

Core Number:	C5
Source:	Basement, Center Column at 30
Sample Depth:	From 4.56" From Face to 9.97
Description:	Basement, Center Column at 30
Area, in^2:	5.726
Volume, ft^3	0.01714
Density. $lbs./ft^3$	140.4
Sample Condition:	WET
Temperature at Loading, ^0F:	70
Rate of Loading, psi/sec.	45 to 50

Laboratory Test Results

Core Number	Test Date	Unit Weight ($Lbs./ft^3$)	Load (Kips)	Uncorr. Strength (Psi)	Correction Factor	Break Type	Corrected Strength (Psi)
C5	09/16/08	140.4	20.6	3596	1.00	3	3596



1 Cone; 2 Cone and Split; 3 Cone and Shear; 4 Shear; 5 Columnar; 6 Other

Remarks: 3" core samples were used due to spacing of the concrete reinforcement and concrete thickness of test locations.

Reviewed: Darrell A. Gilman, CMT Manager

Sent:

VIL_RESP02202

Summit Geoengineering Services
434 Cony Road, Augusta, Maine 04330
Phone:(207) 621-8334 Fax: (207) 626-9094

Obtaining & Testing Drilled Cores & Sawed Beams of Concrete ASTM C42

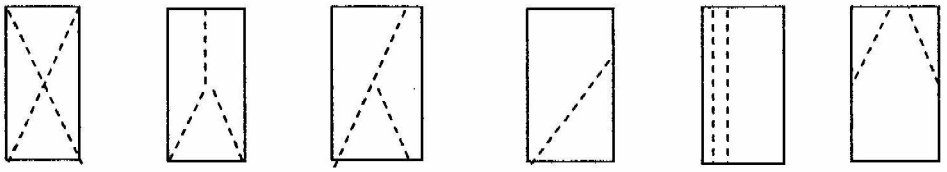
Project:	Little Falls Landing	**Project Number:**	14134
Client:	Resurgence Engineering	**Sample Number:**	C6B
Source:	Basement, South Wall at Line 40	**Date:**	September 16, 2008
		Technician:	M. Sullivan

Test Data

Core Number:	C6B
Source:	Basement, South Wall at Line 40
Sample Depth:	From Face to 4.36"
Description:	Basement, South Wall at Line 40
Area, in^2:	5.726
Volume, ft^3	0.01483
Density. $lbs./ft^3$	137.8
Sample Condition:	WET
Temperature at Loading, ^0F:	70
Rate of Loading, psi/sec.	45 to 50

Laboratory Test Results

Core Number	Test Date	Unit Weight ($Lbs./ft^3$)	Load (Kips)	Uncorr. Strength (Psi)	Correction Factor	Break Type	Corrected Strength (Psi)
C6B	09/16/08	137.8	23.6	4116	0.98	4	4026



1 Cone | 2 Cone and Split | 3 Cone and Shear | 4 Shear | 5 Columnar | 6 Other

Remarks: 3" core samples were used due to spacing of the concrete reinforcement and concrete thickness of test locations.

Reviewed: Darrell A. Gilman, CMT Manager
Sent: 9/16/2008

VIL_RESP02203

Summit Geoengineering Services
434 Cony Road, Augusta, Maine 04330
Phone:(207) 621-8334 Fax: (207) 626-9094

Obtaining & Testing Drilled Cores & Sawed Beams of Concrete ASTM C42

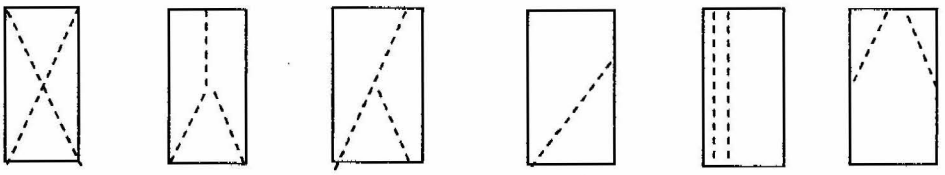
Project:	Little Falls Landing	**Project Number:**	14134
Client:	Resurgence Engineering	**Sample Number:**	C7 Topping
Source:	Basement, Floor Between Lines 4	**Date:**	September 16, 2008
		Technician:	M. Sullivan

Test Data

Core Number:	C7 Topping
Source:	Basement, Floor Between Lines 43 to 46
Sample Depth:	From Face to 3.4"
Description:	Basement Floor Topping
Area, in^2:	5.726
Volume, ft^3	0.01116
Density. $lbs./ft^3$	133.3
Sample Condition:	WET
Temperature at Loading, ^0F:	70
Rate of Loading, psi/sec.	45 to 50

Laboratory Test Results

Core Number	Test Date	Unit Weight ($Lbs./ft^3$)	Load (Kips)	Uncorr. Strength (Psi)	Correction Factor	Break Type	Corrected Strength (Psi)
C7 Topping	09/16/08	133.3	25.5	4	0.94	4	4178



1 Cone; 2 Cone and Split; 3 Cone and Shear; 4 Shear; 5 Columnar; 6 Other

Remarks: 3" core samples were used due to spacing of the concrete reinforcement and concrete thickness of test locations.

Reviewed: Darrell A. Gilman, CMT Manager
Sent: 9/16/2008

VIL_RESP02204

Summit Geoengineering Services
434 Cony Road, Augusta, Maine 04330
Phone:(207) 621-8334 Fax: (207) 626-9094

Obtaining & Testing Drilled Cores & Sawed Beams of Concrete ASTM C42

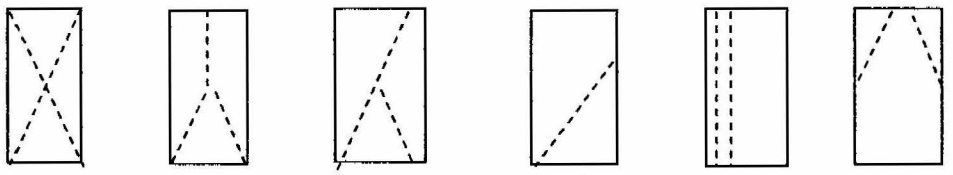
Project:	Little Falls Landing	**Project Number:**	14134
Client:	Resurgence Engineering	**Sample Number:**	C7 Beam
Source:	Basement, Floor Between Lines 4	**Date:**	September 16, 2008
		Technician:	M. Sullivan

Test Data

Core Number:	C7 Beam
Source:	Basement, Floor Between Lines 43 to 46
Sample Depth:	From top of beam to 3.4"
Description:	Basement Floor Beam
Area, in^2:	5.726
Volume, ft^3	0.01126
Density. $lbs./ft^3$	144.6
Sample Condition:	WET
Temperature at Loading, ^0F:	70
Rate of Loading, psi/sec.	45 to 50

Laboratory Test Results

Core Number	Test Date	Unit Weight ($Lbs./ft^3$)	Load (Kips)	Uncorr. Strength (Psi)	Correction Factor	Break Type	Corrected Strength (Psi)
C7 Beam	09/16/08	144.6	29.2	5	0.94	6	4785



1 Cone; 2 Cone and Split; 3 Cone and Shear; 4 Shear; 5 Columnar; 6 Other

Remarks: 3" core samples were used due to spacing of the concrete reinforcement and concrete thickness of test locations.

Reviewed: Darrell A. Gilman, CMT Manager
Sent: 9/16/2008

VIL_RESP02205

Summit Geoengineering Services
434 Cony Road, Augusta, Maine 04330
Phone:(207) 621-8334 Fax: (207) 626-9094

Obtaining & Testing Drilled Cores & Sawed Beams of Concrete ASTM C42

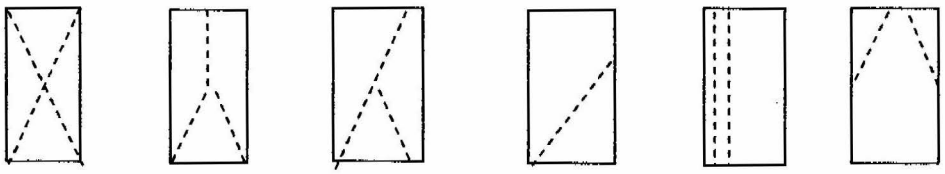
Project:	Little Falls Landing	**Project Number:**	14134
Client:	Resurgence Engineering	**Sample Number:**	C8
Source:	Outside North Wall, Column on L	**Date:**	September 16, 2008
		Technician:	M. Sullivan

Test Data

Core Number:	C8
Source:	Outside North Wall, Column on Line 40
Sample Depth:	From Face to 4.93"
Description:	Outside North Wall, Column on Line 40
Area, in^2:	5.726
Volume, ft^3	0.01622
Density. $lbs./ft^3$	143.2
Sample Condition:	WET
Temperature at Loading, ^0F:	70
Rate of Loading, psi/sec.	45 to 50

Laboratory Test Results

Core Number	Test Date	Unit Weight ($Lbs./ft^3$)	Load (Kips)	Uncorr. Strength (Psi)	Correction Factor	Break Type	Corrected Strength (Psi)
C8	09/16/08	143.2	24.3	4	1.00	2	4237



1 Cone | 2 Cone and Split | 3 Cone and Shear | 4 Shear | 5 Columnar | 6 Other

Remarks: 3" core samples were used due to spacing of the concrete reinforcement and concrete thickness of test locations.

Reviewed: Darrell A. Gilman, CMT Manager
Sent: 9/16/2008

VIL_RESP02206

Summit Geoengineering Services
434 Cony Road, Augusta, Maine 04330
Phone:(207) 621-8334 Fax: (207) 626-9094

Obtaining & Testing Drilled Cores & Sawed Beams of Concrete ASTM C42

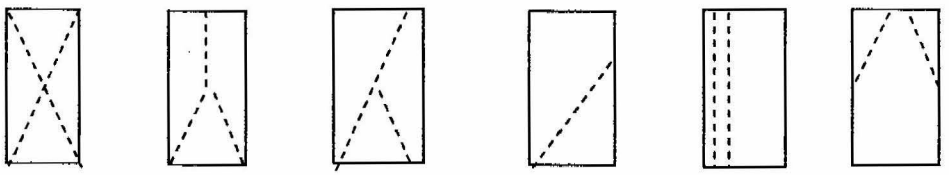
Project:	Little Falls Landing	**Project Number:**	14134
Client:	Resurgence Engineering	**Sample Number:**	C9
Source:	Second Floor, Wall at Line 1	**Date:**	September 16, 2008
		Technician:	M. Sullivan

Test Data

Core Number:	C9
Source:	Second Floor, Wall at Line 1
Sample Depth:	From Face to 5.4"
Description:	Second Floor, Wall at Line 1
Area, in^2:	5.726
Volume, ft^3	0.01751
Density. $lbs./ft^3$	141.7
Sample Condition:	WET
Temperature at Loading, ^0F:	70
Rate of Loading, psi/sec.	45 to 50

Laboratory Test Results

Core Number	Test Date	Unit Weight ($Lbs./ft^3$)	Load (Kips)	Uncorr. Strength (Psi)	Correction Factor	Break Type	Corrected Strength (Psi)
C9	09/16/08	141.7	34.7	6057	1.00	4	6057



1 Cone | 2 Cone and Split | 3 Cone and Shear | 4 Shear | 5 Columnar | 6 Other

Remarks: 3" core samples were used due to spacing of the concrete reinforcement and concrete thickness of test locations.

Reviewed: Darrell A. Gilman, CMT Manager
Sent: 9/16/2008

VIL_RESP02207

Summit Geoengineering Services
434 Cony Road, Augusta, Maine 04330
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Obtaining & Testing Drilled Cores & Sawed Beams of Concrete ASTM C42

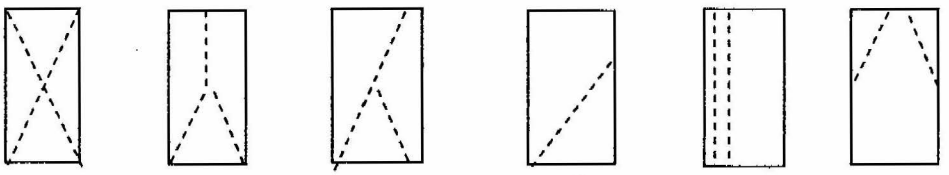
Project:	Little Falls Landing	**Project Number:**	14134
Client:	Resurgence Engineering	**Sample Number:**	C10
Source:	Second Floor, Beam at Line 4	**Date:**	September 16, 2008
		Technician:	M. Sullivan

Test Data

Core Number:	C10
Source:	Second Floor, Beam at Line 4
Sample Depth:	Composite Topping & Beam - Face to 4.46"
Description:	Second Floor, Beam at Line 4
Area, in^2:	5.726
Volume, ft^3	0.01454
Density. $lbs./ft^3$	149.0
Sample Condition:	WET
Temperature at Loading, ^0F:	70
Rate of Loading, psi/sec.	45 to 50

Laboratory Test Results

Core Number	Test Date	Unit Weight ($Lbs./ft^3$)	Load (Kips)	Uncorr. Strength (Psi)	Correction Factor	Break Type	Corrected Strength (Psi)
C10	09/16/08	149.0	48.5	8470	0.98	4	8259



1 Cone | 2 Conc and Split | 3 Cone and Shear | 4 Shear | 5 Columnar | 6 Other

Remarks: 3" core samples were used due to spacing of the concrete reinforcement and concrete thickness of test locations.

Reviewed: Darrell A. Gilman, CMT Manager
Sent: 9/16/2008

VIL_RESP02208

Summit Geoengineering Services
434 Cony Road, Augusta, Maine 04330
Phone:(207) 621-8334 Fax: (207) 626-9094

Obtaining & Testing Drilled Cores & Sawed Beams of Concrete ASTM C42

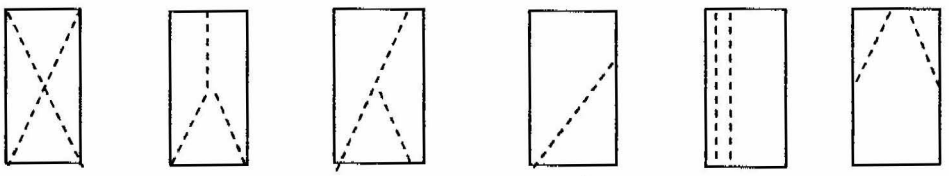
Project:	Little Falls Landing	**Project Number:**	14134
Client:	Resurgence Engineering	**Sample Number:**	C12
Source:	Second Floor, Beam at Line 17.5	**Date:**	September 16, 2008
		Technician:	M. Sullivan

Test Data

Core Number:	C12
Source:	Second Floor, Beam at Line 17.5
Sample Depth:	From Face to 3.47"
Description:	Second Floor, Beam at Line 17.5
Area, in^2:	5.726
Volume, ft^3	0.01161
Density. $lbs./ft^3$	144.8
Sample Condition:	WET
Temperature at Loading, ^0F:	70
Rate of Loading, psi/sec.	45 to 50

Laboratory Test Results

Core Number	Test Date	Unit Weight ($Lbs./ft^3$)	Load (Kips)	Uncorr. Strength (Psi)	Correction Factor	Break Type	Corrected Strength (Psi)
C12	09/16/08	144.8	46.0	8032	0.94	4	7550



1 Cone; 2 Cone and Split; 3 Cone and Shear; 4 Shear; 5 Columnar; 6 Other

Remarks: 3" core samples were used due to spacing of the concrete reinforcement and concrete thickness of test locations.

Reviewed: Darrell A. Gilman, CMT Manager
Sent: 9/16/2008

VIL_RESP02209

Summit Geoengineering Services
434 Cony Road, Augusta, Maine 04330
Phone:(207) 621-8334 Fax: (207) 626-9094

Obtaining & Testing Drilled Cores & Sawed Beams of Concrete ASTM C42

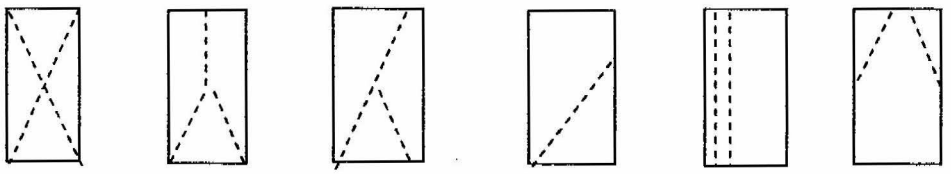
Project:	Little Falls Landing	**Project Number:**	14134
Client:	Resurgence Engineering	**Sample Number:**	C13
Source:	Second Floor, Top of Girder Line	**Date:**	September 16, 2008
		Technician:	M. Sullivan

Test Data

Core Number:	C13
Source:	Second Floor, Top of Girder Line 18
Sample Depth:	From Face to 4.05"
Description:	Second Floor, Top of Girder Line 18
Area, in^2:	5.726
Volume, ft^3	0.01346
Density. $lbs./ft^3$	140.3
Sample Condition:	WET
Temperature at Loading, ^0F:	70
Rate of Loading, psi/sec.	45 to 50

Laboratory Test Results

Core Number	Test Date	Unit Weight ($Lbs./ft^3$)	Load (Kips)	Uncorr. Strength (Psi)	Correction Factor	Break Type	Corrected Strength (Psi)
C13	09/16/08	140.3	43.1	7527	0.96	3	7256



1 Cone | 2 Cone and Split | 3 Cone and Shear | 4 Shear | 5 Columnar | 6 Other

Remarks: 3" core samples were used due to spacing of the concrete reinforcement and concrete thickness of test locations.

Reviewed: Darrell A. Gilman, CMT Manager
Sent: 9/16/2008

VIL_RESP02210

Summit Geoengineering Services
434 Cony Road, Augusta, Maine 04330
Phone:(207) 621-8334 Fax: (207) 626-9094

Obtaining & Testing Drilled Cores & Sawed Beams of Concrete ASTM C42

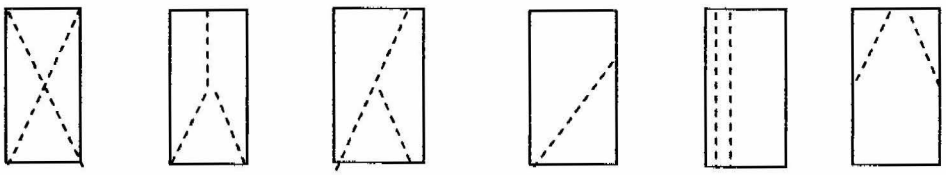
Project:	Little Falls Landing	**Project Number:**	14134
Client:	Resurgence Engineering	**Sample Number:**	C14
Source:	Second Floor, South Wall Colum	**Date:**	September 16, 2008
		Technician:	M. Sullivan

Test Data

Core Number:	C14
Source:	Second Floor, South Wall Column at Line 30
Sample Depth:	From Face to 5.31"
Description:	Second Floor, South Wall Column at Line 30
Area, in^2:	5.726
Volume, ft^3	0.01717
Density. $lbs./ft^3$	146.2
Sample Condition:	WET
Temperature at Loading, ^0F:	70
Rate of Loading, psi/sec.	45 to 50

Laboratory Test Results

Core Number	Test Date	Unit Weight ($Lbs./ft^3$)	Load (Kips)	Uncorr. Strength (Psi)	Correction Factor	Break Type	Corrected Strength (Psi)
C14	09/16/08	146.2	34.5	6	1.00	3	6018



1 Cone | 2 Cone and Split | 3 Cone and Shear | 4 Shear | 5 Columnar | 6 Other

Remarks: 3" core samples were used due to spacing of the concrete reinforcement and concrete thickness of test locations.

Reviewed: Darrell A. Gilman, CMT Manager
Sent: 9/16/2008

VIL_RESP02211

VIL_RESP02212

SUMMIT
GEOENGINEERING SERVICES

The following locations are in coordination with these sample numbers.

Sample Number	Location
C1	Basement East Wall at Line 5.5
C3	Basement North Wall at Line 21.5
C6 B	Basement South Wall at Line 40 (2 Cores)
C7	Basement Floor Between Lines 43 to 46 (Topping & Slab)
C11	Second Floor South Wall Column at Line 13
C12	Second Floor Beam at Line 17.5 (Topping & Beam)
C14	Second Floor South Wall Column at Line 30

VIL_RESP02213

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8 HARLOW STREET, SUITE 4A ▲ BANGOR, MAINE 04401 ▲ TEL: (207) 262-9040 ▲ FAX: (207) 262-9080
PO BOX 4698 ▲ AUGUSTA, MAINE 04330 ▲ TEL: (207) 621-8334 ▲ FAX: (207) 626-9094

AMERICAN PETROGRAPHIC SERVICES, INC.

REPORT OF CHLORIDE-ION CONTENT
AASHTO-T260 PROCEDURE C

PROJECT:

LITTLE FALLS
SOUTH WINDHAM, MAINE

REPORTED TO:

SUMMIT GEOENGINEERING SERVICES
434 CONY ROAD
AUGUSTA, ME 04330-4698

ATTN: DARRELL GILMAN

APS JOB NO: 10-05599

DATE: SEPTEMBER 30, 2008

INTRODUCTION

This report presents the results of laboratory work performed by our firm on seven approximately one-half pound sized compression tested concrete samples submitted to us by Mr. Darrell Gilman of Summit Geoengineering Services on September 22, 2008. The scope of our work was limited to documenting the chloride-ion content of each sample.

TEST RESULTS

Sample Number	Parts Per Million	Cl^- lbs/yd^3**
C1 (overall)	<80	<0.3
C3 (overall)	<80	<0.3
C6 B (overall)	<80	<0.3
C7 Beam (overall)	<80	<0.3
C11 (overall)	115	0.5
C12 (overall)	115	0.5
C14 (overall)	210	0.8

**Calculations based on a 3740 and 3980 lb. unit weight

Our experience has been that chloride-ion levels in excess of 300 to 400 ppm will cause problems with corrosion of embedded steel reinforcement and significantly increase the number of freeze-thaw

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cycles. Additionally, deicer salts allow the concrete to become critically saturated. This critical saturation causes each freeze-thaw cycle to be more severe.

TEST PROCEDURES

Laboratory testing was performed on September 22, 2008 and subsequent dates, our procedures were as follows:

We obtained a 3-gram pulverized portion of each sample by crushing a saw cut piece or by use of an impact drill (which passed through a #20 sieve). We then mixed the powder with 20 ml of digestion solution for a total of three minutes and then added 80 ml of stabilizing solution. We then immersed a calibrated electrode coupled to an Orion Model 720 pH/ISE meter in the solution and recorded the chloride-ion concentration. This method is consistent with APS Standard Operating Procedure 00 LAB 017, "Sampling and Testing for Chloride-Ion in Concrete and Concrete Raw Materials, AASHTO:T260 - Procedure C."

By testing six pulverized concrete QA samples of known chloride content, we were able to determine the standard deviation for this chloride test. Each QA sample was tested five times and the following standard deviation ranges were calculated. Samples with chloride levels from 80-200 ppm have a STD = 26 ppm, 201-450 ppm STD = 30 ppm, 451-950 ppm STD= 40 ppm, 951-2000 ppm STD=70 ppm, 2001-4000 ppm STD= 215 ppm and 4001-6000 ppm STD= 300 ppm. Results that are <80 ppm or >6000 ppm are reported as such due to the high magnitude of the standard deviation in both cases.

REMARKS

The test samples will be retained for a period of at least thirty days from the date of this report. Unless further instructions are received by that time, the samples may be discarded. The test results relate only to the sample tested. No warranty, express or implied, is made.

Report Prepared by:
American Petrographic Services, Inc.

Megan Koch
Petrographer/Geologist

Reviewed by:
American Petrographic Services, Inc.

Scott Wolter, PG
President
MN License #30024

VIL_RESP02215